OSD AUDIO

PA270
PA150
PA90

Commercial Integrated Amplifier/Mixer

Owner's Manual

PA Series Commercial Integrated Amplifier/Mixer

Congratulations on purchasing the OSD PA Series of Commercial Integrated Amplifier/Mixer. The series includes three models: the PA90, PA150, and PA270; each unit includes convenient features for your commercial amplification, mixing and PA-system needs. Please take a few moments to read the entire manual, and be sure to retain this document for future reference. Please read and observe all safety instructions detailed on each page. ***Note: If any part of this product is damaged or missing, please call OSD Audio Return Department at (562) 697-2600.***

FRONT PANEL CONTROLS

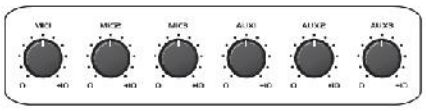
The front panel of the OSD PA Commercial Integrated Amplifier/Mixer includes controls for up to 3 microphone inputs (MIC1, MIC2, MIC3), 3 Auxiliary inputs (AUX1, AUC2, AUX3), and input gain adjustment functions for output volume (Master), Treble and Bass. Each of the MIC inputs and the AUX inputs can be adjusted to the input gain using the corresponding control knobs on the front panel.

The front panel also includes an LED meter that indicates the output level located above the POWER pushbutton as well as LED indicators for Chime and ALARM status.

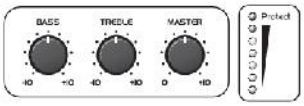
POWER

The POWER push button will manually switch the PA Commercial Amplifier/Mixer On and Off.

Control Knobs Input Adjustment



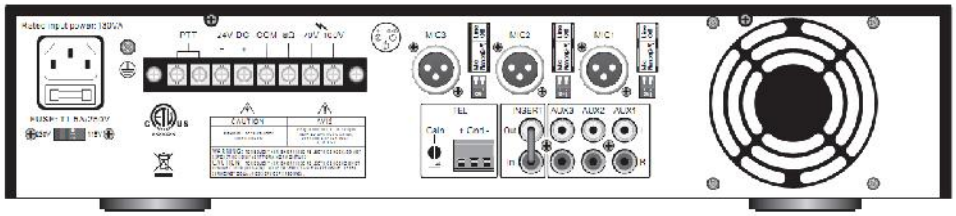
Output Adjustment



Note: The OSD PA Commercial Integrated Amplifier/Mixer includes a protection feature. When short circuiting, overheating, or an overload is detected, this function will automatically switch on. The product will mute and the RED PROTECT LED indicator will illuminate.

ALARM/CHIME

The OSD PA Commercial Integrated Amplifier/Mixer includes CHIME and ALARM (ALE) functions. The Alarm signal can be sounded continuously over a PA system during an emergency or drill. The Chime can alert listeners of an impending broadcast or announcement. The ALARM has the initial priority over CHIME. When pressing CHIME button, all inputs will temporarily mute and the chime will sound. When pressing ALARM (ALE) button, the alarm function will sound and will not stop until you press the ALE button again. All inputs will be muted including the CHIME tone when the alarm function is on.



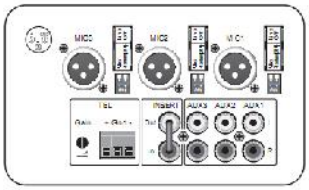
BACK PANEL CONTROLS

There are a total of 7 inputs on the rear panel of the PA Series Commercial Integrated Amplifier/Mixer. These include: 3 MIC inputs, 3 AUX inputs, and 1 TEL input with input gain adjustment. The MIC inputs use balanced XLR connectors, and each MIC input has a Line/Mic level DIP switch (Switch 1) and a 24V Phantom Power supply On/Off DIP switch (Switch 2). When the Line/Mic DIP switch is switched down, the corresponding MIC input is set to accept a Mic-level signal input. If the Line/Mic DIP switch is switched up, the corresponding MIC input is set to accept A Line level signal input. If the Phantom Power Supply DIP switch is switched down, the corresponding MIC input will provide 24V phantom power to the microphone. If the Phantom Power Supply Dip Switch is switched up, the corresponding MIC input will not provide phantom power to microphone.

The AUX inputs use RCA connectors and each group of AUX input has "L" and "R" as left channel and right channel inputs respectively. There is an optional TEL input with a 3-pin terminal block that allows you to connect a telephone signal. This will mute all functions when it senses an incoming telephone call. The TEL input gain can be adjusted by the screwdriver adjustment knob labeled as "Gain" beside the terminal block.

The OSD PA Commercial Integrated Amplifier/Mixer also has 1 pair of RCA connectors used as "INSERT" in and out. The INSERT IN connector allows you to connect an external audio source to the unit. The INSERT OUT connector allows you to loop the input sources of PA Series out to other devices.

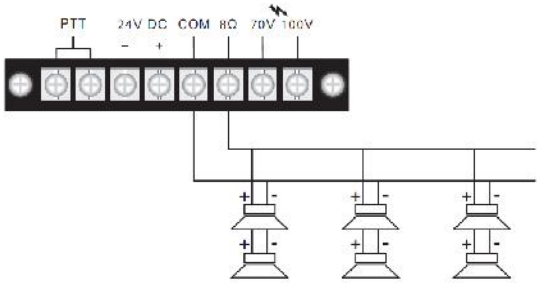
NOTE: The MIC 1 Input has priority over the other inputs. When the MIC 1 Input signal is present, the OSD PA Commercial Amplifier/Mixer will automatically mute other inputs and only the MIC 1 Input is available to output.



INPUTS

GENERAL APPLICATIONS OSD PA COMMERCIAL INTEGRATED AMPLIFIER/MIXER

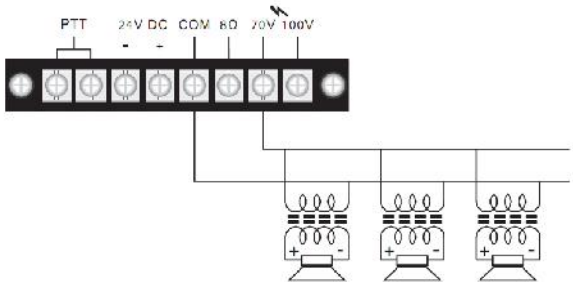
In this configuration, the 8-ohm speakers are connected to the 8Ω and COM terminals. The output of the PA Series will then deliver the rated output power into the 8-ohm load. If you want to connect multiple speakers to the PA Series, use a parallel-arrangement to make the combined impendence 8 ohm or higher. When connecting the speakers, the speaker's positive terminal should be connected to the 8Ω terminal for an in-phase connection.



Note: The minimum working load of the OSD PA Series is 8 ohm. Make sure the total impedance is not lower than that.

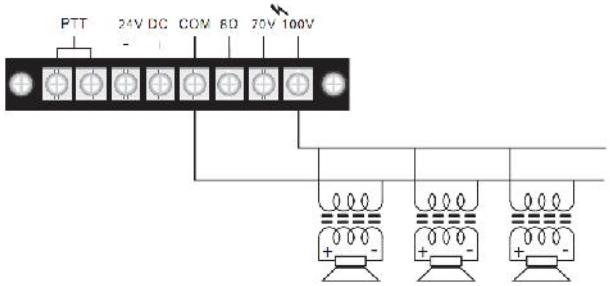
CONNECTING 70V CONSTANT VOLTAGE SPEAKEARS

In this configuration, the 70V constant speakers are connected to the 70V and COM terminals. The output of the PA Series will then deliver the rated output power of the 70V speakers. Multiple 70V speakers should be connected in parallel. When connecting speakers, the speaker's positive terminal should be connected to the 70V terminal and the speaker's negative terminal should be connected to COM terminal for in-phase connection.



CONNECTING 100V CONSTANT VOLTAGE SPEAKERS

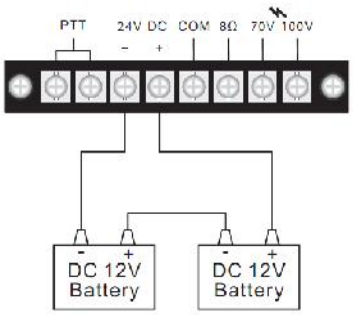
In this configuration, the 100V constant speakers are connected to the 100V and COM terminals. The output of the PA Series will then deliver the rated output power of the 100V speakers. Multiple 100V speakers should be connected in parallel. When connecting speakers, the speaker's positive terminal should be connected to the 100V terminal and the speaker's negative terminal should be connected to COM terminal for in-phase connection.



Note: In 70V/100V constant voltage connection, the summed speaker's power should not exceed the rated PA Series output power.

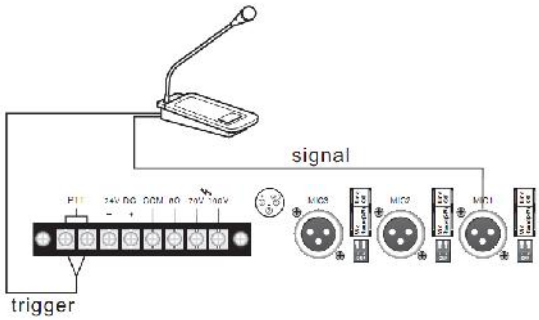
USING THE DC 24V POWER SUPPLY

In this configuration, a DC 24V power supply is connected to the PA Series to help for use in mobile applications or in applications that must continue to operate in case of an AC power failure.



USING THE PUSH TALK (PPT) FUNCTION

In this configuration, MIC 1 is connected to PTT terminals to activate the "Push to Talk" function. When the PTT function is switched on, all the inputs except MIC 1 will be overruled.



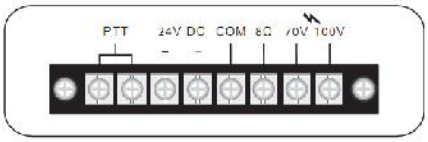
Note: Only Mic 1 input could work with "Push to Talk(PTT)" function.

INSTALLING THE UNIT IN A RACK

The OSD PA Series is set to install in a 19" rack. When mounting in a rack, make sure the mounting brackets are well fixed by the screw and remove the 4 feet from the bottom of the unit.

Note: Ensure to Install the unit where the ambient temperature does not exceed 55°C.

If you have any questions regarding how to set this up, please call OSD AUDIO support at (562) 697-2600.



OUTPUT MODULE

The OSD PA Series output module, including PTT (Push to Talk), 24V DC back-up power supply, 8 ohm output, 70V output and 100V output, uses screw terminal connectors. If you have an 8-ohm output, connect the speaker's positive terminal to the amplifier's "8Ω" terminal and connect the speaker's negative terminal to the amplifier's "COM" terminal. If you use the 70V output, connect the speaker's positive terminal to the amplifier's "70V" terminal and connect the speaker's negative terminal to the amplifier's "COM" terminal.

If you use 100V output, connect the speaker's positive terminal to the amplifier's "100V" terminal and connect the speaker's negative terminal to the amplifier's "COM" terminal. The PTT connectors allow you to connect the OSD PA Commercial Integrated Amplifier/Mixer to external devices to activate the "Push to Talk" function. When this function is switched on, all inputs will be muted and you can use MIC 1 to broadcast an announcement. The 24V DC connectors allow you to connect an external back-up power supply in case of a power failure or in mobile applications where 115V or 230V AC power is not available.

Note: This amplifier will supply 60W to the output. Please verify that your speakers are capable of handling such power to avoid possible damage!

SPECIFICATIONS

PA90/PA150/PA270

- Push to talk (PTT) muting on microphone 1
- Priority functions of inputs 1-3 over auxiliary AUX switch activation. Priority functions of input 1 over other inputs, activated by microphone (voice priority).
- 2 tone chimes
- Tape out
- MIC Volume Control
- AUX Volume Control
- MASTER Volume Control
- Phantom power(+24V) on all microphone channels
- Short circuit and thermal shutdown circuit protection.
- Output terminals for 100V and 70V and 8Ω loads

MODEL	(OSD PA-90)	(OSD –PA-150)	(OSD –PA-270)
Power out	60W	120W	240W
MIC input (balance)	3 CH		
	-50dB		
MIC input (unbalance)	-50dB		
AUX INPUT	3 CH		
	-10 dB		
Tape Out	-dB		
Frequency Response	55Hz-15KHz,-3dB		
Distortion	< 0.5% @ 1kHz		
S/N	MIC: +/- 65dB		
	AUX: +/- 75dB		
Dimensions (mm)	430*230*88		

WARNING

- TO PREVENT FIRE OR SHOCK HAZARD, DO NOT USE THIS PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.
- TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE APPLIANCE TO RAIN OR MOISTURE.

(POUR PRÉVENIR UN INCENDIE OU D'ÉLECTROCUTION, NE PAS EXPOSER CET APPAREIL À LA PLUIE OU L'HUMIDITÉ.)

- TO PREVENT ELECTRICAL SHOCK, MATCH WIDE BLADE TO WIDE SLOT, FULLY INSERT.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.	Warning: To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.	The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Read all warnings.
4. Follow all instructions.
5. Do not use this appliance near water.
6. Clean only with dry cloth.
7. The Equipment shall be operated in open area.
8. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
9. Do not install near heat sources such as radiators, heat registers, stoves, or other appliance (including amplifiers) that produce heat.
10. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the appliance.
12. Only use attachments or accessories specified by the manufacturer.
13. Unplug the appliance during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the appliance has been damaged in anyway, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the appliance, the appliance has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Use only with the cart, stand, tripod bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

This appliance shall not be exposed to dripping or splashing water and no object filled with liquids such as vases shall be placed on appliance.
L'appareil ne doit pas être exposé aux écoulements ou aux éclaboussures et aucun objet ne contenant de liquide, tel qu'un vase, ne doit être placé sur l'objet.

Both main plug or main switch disconnect device instruction is accepted.
The mains switch is used as disconnect device and to completely disconnect the apparatus from mains supply, the mains switch must be switched to "OFF" position and the mains switch of apparatus should not be obstructed OR should be easily accessed during intended use. In addition, the location of mains switch on the apparatus and its function shall be described.
Le commutateur du secteur est utilisé pour déconnecter le système. Pour déconnecter complètement l'appareil de l'alimentation, le commutateur du secteur doit être positionné sur «OFF». Le commutateur du secteur ne doit pas être obstrué ou doit être facilement accessible pendant son utilisation.